The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1-49 (Previously Cancelled)

49. (Currently Amended) A method of identifying a compound which binds to a polypeptide sequence comprising ~~one of~~ SEQ ID NO:~~os.~~ 5 ~~or~~ 6,comprising contacting said polypeptide with a ~~said~~ candidate compound and detecting binding of said candidate compound to said polypeptide.

50. (Currently Amended) A method for identifying a compound which specifically binds to the CCR5 chemokine receptor whose amino acid sequence is SEQ ID NO: 5, the method comprising the steps of:

(a) transfecting a cell with a nucleic acid molecule encoding said receptor ~~or said portion thereof~~;

(b) expressing said receptor ~~or portion thereof~~ under conditions permitting specific binding of said compound to said receptor ~~or portion thereof~~;

(c) exposing said cell to ~~a sample suspected of comprising~~ said compound; and

(d) detecting the presence of ~~any~~ said compound which has specifically bound to said receptor ~~or portion thereof~~, thereby determining whether said compound specifically binds to said receptor ~~or portion thereof~~.

51. (Currently Amended) ~~The method according to claim 61, further~~ A method for identifying a compound which specifically binds to the CCR5 chemokine receptor whose amino acid sequence is SEQ ID NO: 5, the method comprising the steps of:

(a) transfecting a cell with a nucleic acid molecule encoding said receptor,

(b) expressing said receptor by said cell,

(c) preparing a cell extract from the cell transfected with said nucleic acid molecule,

(d) isolating a membrane fraction of said cell extract, ~~and~~

(e) contacting said compound with said membrane fraction under conditions permitting binding of the compound to said fraction, and

(f) detecting the presence of said compound which has specifically bound to said receptor, wherein said detection indicates that said compound specifically binds to said receptor.

52. (Currently Amended) The method according to claim ~~61~~ 50, wherein said detecting is performed by monitoring a change in the G- protein coupled signaling activity of said CCR5 chemokine receptor ~~or portion thereof~~.

53. (Currently Amended) The method according to claim ~~61~~ 50, wherein said detecting is performed by ~~monitoring the acidification rate of said host cell~~ measuring the modifications of cell metabolism resulting from the stimulation of an intracellular cascade.

54. (Currently Amended) The method according to claim ~~63~~ 52, wherein said detecting is performed by monitoring the level of intracellular calcium in said host cell.

55. (Currently Amended) The method according to claim 53 ~~63~~, wherein said modifications of cell metabolism are detected ~~detecting is performed~~ by monitoring ~~the stimulation of an intracellular cascade~~ the acidification rate of said host cell.

56. (Currently Amended) The method according to claim 52 ~~63~~, wherein said detecting is performed by monitoring the level of inositol triphosphate.

57. (Currently Amended) ~~The~~ A method ~~according to claim 61, wherein said compound is~~ for identifying a compound as an agonist of the CCR5 chemokine receptor whose amino acid sequence is SEQ ID NO:5, comprising the steps of:

(a) transfecting a cell with a nucleic acid molecule encoding said receptor,

(b) expressing said receptor under conditions permitting specific binding of said compound to said receptor;

(c) contacting the cells from part (b) with said compound under conditions permitting the activation of a functional peptide response from the cell, and

(d) detecting said response,

wherein the detection of an increase in said response indicates that the compound is an agonist of said CCR5 chemokine receptor.

58. (Currently Amended) ~~The~~ A method ~~according to claim 61, wherein said compound is~~ for identifying a compound as an antagonist of the CCR5 chemokine receptor whose amino acid sequence is SEQ ID NO:5, comprising the steps of:

(a) transfecting a cell with a nucleic acid molecule encoding said receptor,

(b) expressing said receptor in the transfected cells of part (a),

(c) contacting the cells from part (b) with said compound in the presence of an agonist of said receptor, under conditions permitting the activation of a functional response from the cell, and

d) detecting said response,

wherein the detection of a decrease in said response relative to the response detected from contacting the cells from part (b) in the presence of said agonist but in the absence of said compound indicates that the compound is an antagonist of said CCR5 chemokine receptor.

59. (Currently Amended) The method according to any one of claims ~~claim 61~~ 50, 51, 57, or 58, wherein said cell is selected from the group consisting of CHO-K1, HEK293, BHK21, and COS-7.

60. (Currently Amended) The method according to claim 58~~61~~, wherein said ~~cell is exposed to said sample suspected of comprising said compound, in the presence of a ligand~~ agonist for the CCR5 receptor is the CCR5 chemokine.

61. (Currently Amended) The method according to claim 5871, wherein said agonist ligand which is the CCR5 chemokine, and wherein said CCR5 chemokine is labeled.

62. (Currently Amended) The method of claim 50 61, further comprising measuring the infectivity of the cell from said step (c) by HIV in the presence of the detected compound from step (d), wherein a decrease in HIV infectivity of said cell from said step (c) relative to that of said cell from said step (b) which was not exposed to said compound, indicates that said compound inhibits the ability of HIV-1 to utilize said CCR5 chemokine receptor as a cofactor.

63. (Currently Amended) The method according to claim 6273, wherein said infectivity of the cell by HIV is measured by measuring the production of an HIV protein.

64. (Currently Amended) The method according to claim 6374, wherein said HIV protein is p24.

65. (Currently Amended) The method of claim 6273, wherein said compound decreases infectivity by HIV by at least two-fold.

66-81. (Currently Canceled)